

Commentary

A Proposed Collaboration Against Big Tobacco: Common Ground Between the Vaping and Public Health Community in the United States

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Abstract

An unfortunate conflict is underway between the public health community and the vaping community over e-cigarettes' harmfulness or lack thereof. This conflict is made worse by an information vacuum that is being filled by vocal members on both sides of the debate; a perceived lack of credibility of public health officials by those in the vaping community; the tobacco industry's recent involvement in e-cigarettes; and the constant evolution of different styles and types of e-cigarettes. This conflict is avoidable; common ground exists. If both groups rally around what is in their own and the public's best interest—the end of combustible tobacco—all will benefit significantly. If not, the result may be missed opportunities, misguided alliances, and—ultimately—poorer public health.

Implications: This study brings light to the contentious debate between the vaping and public health communities. It addresses how both sides are responsible for bringing misleading information to the public and vocal leaders on both sides are unknowingly intensifying and polarizing the debate—likely at the expense of public health. It also describes how this conflict is avoidable, and provides a starting point for potential positions of common ground against Big Tobacco.

Introduction

The proliferation of e-cigarettes and other “vapor” devices continues as do the controversies surrounding them. While far from perfect and not harmless, some believe these products have a potential net public health benefit as an appealing method for smoking cessation,^{1–5} especially as smoking rates and deaths attributable to smoking remain high and current methods of cessation do not appear to be enough to end this epidemic. However, an unfortunate conflict is underway between the vaping community (comprised of independent e-cigarette manufacturers, retailers, local, regional and national vaping

advocacy groups) and the public health community (comprised of state health departments, national public health institutes, regional and national tobacco control advocacy groups, tobacco control workers and other “boots-on-the-ground” public health practitioners).^{6,7} Although there are some examples of public health officials who are also publically in favor of e-cigarettes, in our experience, most public health practitioners in the United States employed by governmental agencies are hesitant, at least publically, to express support for e-cigarette use. This is not the case internationally⁸ and we will discuss what may be learned examining how public health officials in other countries handle e-cigarettes. It is also important

to note that researchers are also a part of this conflict, with some against and others in favor of e-cigarette use^{7,9-13}; however, our discussion here is limited to the conflict between the various individuals and groups of advocates or practitioners within the public health and vaping communities.

The authors suggest an alliance between the public health community and vaping community to advance key public policies proven most effective in reducing the use of combustible cigarettes. Without such an alliance, continued conflict between these two camps on matters of public policy may ultimately result in poorer public health because of (1) missed opportunities to accelerate reductions in the use of combustible cigarettes, and (2) potential efforts by some in the vaping community to build relationships with tobacco companies for the purpose of gaining leverage in legislative matters that do little to reduce the use of combustible products.^{7,14} Lastly, although Big Tobacco currently sells their own e-cigarette products, we purposefully do not include them as part of the vaping community given the point of this commentary is to find common ground between the vaping and public health community to help “end combustible tobacco use.” This is obviously not in the interest of Big Tobacco as the vast majority of their profits come from combustible tobacco, their e-cigarette products do little more than promote dual use for most, and they seem determined to have combustible tobacco remain a major part of the industry for “many years to come”.¹⁵

Historical Context and Conflict

For years, especially following the filter and low tar experience of the 50s, 60s and 70s,^{16,17} the tobacco control climate did not necessitate much nuance or subtlety—use of any tobacco was potentially deadly, and quitting was the only option for anyone interested in improving his or her health. This sentiment holds true today, yet in the context of the relatively stagnant smoking rate in many countries and rising smoking rates in others,¹⁸ and with the emergence of low-nitrosamine, tobacco/nicotine products such as e-cigarettes, the need for subtlety and nuance in the way we differentiate between tobacco products is very important.^{4,5,7} However, many in the public health community have a limited understanding of the relative harm of different tobacco products.¹⁹ Additionally, some are concerned that consumers might misconstrue any formal public health communications stating that “e-cigarettes are less harmful than combustible cigarettes” as tantamount to e-cigarettes being declared “safe” or “risk-free.” Complicating matters more are (1) the few outspoken, hyperbolic leaders on both sides of the e-cigarette debate who reify an in-group/out-group mentality, (2) tobacco companies’ recent involvement in the e-cigarette market and consistent history of deceptive strategies (eg, light/low tar and filtered cigarettes), (3) the ever changing market of different styles and types of e-cigarettes, and (4) a deference at the state and local level to long-anticipated FDA regulations that will largely determine the future of e-cigarettes in the United States.²⁰ Consequently, many in the public health community are understandably hesitant to make any positive statements about e-cigarettes.²¹

Information Vacuum and Credibility Gap

A large part of the conflict between the public health community and the vaping community is due to an information vacuum that continues even as the research base for e-cigarettes accumulates.^{12,13} As a result, current and potential future consumers of e-cigarettes are

filling this void with information provided by local vaping enthusiasts, e-cigarette forums, vaping advocacy groups, various tobacco harm reduction blogs, and what they hear from their local vape store clerk.²² Many “front-line” public health personnel also have suffered from this information vacuum and have filled the void by reading commentaries by advocacy groups and anti-harm reduction blogs. As a result, many on both sides of the issue often get their information with at least a small dose of hyperbole, leading to further entrenchment of extreme beliefs, goals and negative views of the other group and fostering confusion among the public.^{11-13,23}

Points of Contention With the Public Health Community

How research is presented is crucial to the overall common knowledge about e-cigarettes and to the communications between the public health and vaping communities. It is no longer accurate for public health officials to say that we do not know enough about e-cigarettes to support any use of them.²⁴ While falling far short of the large body of research available for FDA-approved cessation products, a MEDLINE literature search using the search terms “e-cigarette”, “electronic cigarette”, and “electronic nicotine delivery” and excluding commentaries, comments and reviews, produces greater than 250 e-cigarette studies ranging from bench research on their chemical constituents to randomized clinical trials examining their effects on smoking behavior and quitting. Some are of poor methodology and/or have conflicts of interest,²⁵ but many do not have these detracting issues and are well done. The research results on the relative harmfulness of e-cigarettes have been generally positive, especially when their hazards are compared and contrasted with combustible cigarettes.^{26,27} Their use as a viable substitute for smoking, however, are mixed, with earlier models (ie, “cig-a-like”) primarily sold by Big Tobacco leading most often to dual use, but newer models (eg, “tank systems”), often sold by independent e-cigarette manufacturers being much more effective.^{26,28,29}

A related inconsistency in public health messaging is the statement that any conclusive findings on e-cigarettes have yet to be established while simultaneously stating that e-cigarettes “may” be potential gateway products for youth or “likely” serve to decrease smokers’ motivation to quit smoking.³⁰ The latest scientific research^{31,32} and some evaluations of national prevalence data³³ suggest these projections could be false. They are based on the precautionary principle, which would be appropriate in a world where current public health efforts were moving rapidly towards eliminating the use of combustible tobacco or where cigarettes did not exist. In that world, there would be little to no benefit from the availability of a viable, cleaner nicotine delivery device. Unfortunately, this is not yet the world in which most of us live. Instead, e-cigarettes have turned into a distraction from the goal of reducing combustible tobacco. Though more research is certainly needed, we know that e-cigarettes are noncombustible and therefore deliver significantly fewer and lower levels of many carcinogens and toxicants compared to combustible cigarettes.³⁴ Indeed, one panel of international experts reviewing the available literature estimated that e-cigarettes could be 95% less harmful than cigarettes.³⁵ Furthermore, the secondhand aerosol from e-cigarettes, although not completely devoid of contaminants and nicotine, is very likely to be much less harmful than secondhand smoke.³⁶ Research is also beginning to suggest that e-cigarettes are potentially as effective as (in some studies more effective than) nicotine replacement therapy (NRT) in helping people quit smoking.^{37,38} Though it is accurate to note that

e-cigarettes contain tobacco-specific nitrosamines, it appears disingenuous to not clarify that so do NRTs.³⁹

Such inconsistencies, coupled with an apparent lack of acknowledgment of the potential positive impact of e-cigarettes, appear to have discredited the public health community in the eyes of many in the vaping community. Some of the more vocal e-cigarette advocates have incorrectly suggested that the public health community is part of a plot to ban e-cigarettes entirely, maintain tobacco tax revenue by not allowing e-cigarettes to compete against combustible cigarettes, and seek to protect the pharmaceutical industry from reduced sales of NRT and other cessation aids. For example, testimony presented by e-cigarette advocates during a recent state Senate hearing included claims that public health groups “...are willing to lie and provide non-credible data to misinform and scare us into submission to save their own jobs and funding” and that “the tobacco control movement is indebted to the pharmaceutical industry,” purporting that “without support from the big drug companies, many of the national meetings, much of the research, some of the journals, and some of the community initiatives would not be possible.”⁶

Points of Contention With the Vaping Community

The vaping community has also disseminated less than credible information about e-cigarette research. Common examples include stating that e-cigarettes are harmless and equating e-cigarette aerosol to water vapor.⁴⁰ Additionally, the vaping community frequently states that it is definitively known what is in e-cigarettes—nicotine, propylene glycol, vegetable glycerin, water and food grade flavorings—and that each of these components (except nicotine) are FDA-approved as safe for human consumption. This assertion is only a half-truth. First, these ingredients are deemed safe for human ingestion, not inhalation.⁴¹ Second, due to the heating of this mixture, a chemical reaction occurs causing the formation of new compounds. The latest research shows that e-cigarette aerosol contains some toxic substances such as formaldehyde, acrolein, acetaldehyde, tobacco-specific nitrosamines, metals, and volatile organic compounds—though the amount of the compounds is far less than that found in combustible cigarette smoke.⁴²

Further, it is important for the vaping community to understand that most of the e-cigarette research to date was completed with first generation devices (cig-a-like devices); therefore, it is not clear how these findings will translate to newer devices such as tank systems and rebuildable atomizers. Preliminary evidence is beginning to suggest that the newer devices will deliver nicotine more effectively and thus will likely be a better substitute for smoking than the cig-a-like models.^{29,43} Conversely, there is emerging evidence that new generations of devices can potentially deliver even more toxic compounds due to vaping style (eg, dripping—directly dripping a few drops of e-liquid into an e-cigarette atomizer) and device characteristics (eg, the ability to increase the voltage and lower the resistance of the heating element to allow for higher temperatures),^{44–46} albeit under conditions that most e-cigarette users may be unlikely to use for extended periods of time (ie, “dry puff conditions”).⁴⁷

It is also important for the vaping community to recognize that some in the public health community have legitimate concerns that still need to be addressed in e-cigarette research.^{21,48–50} For example, it is an understandable concern that introducing a replacement tobacco product that looks so similar to smoking a cigarette but is allowed in places where smoking is banned, could potentially affect

the social norms of tobacco use that have taken decades to establish. Furthermore, while e-cigarette use and other forms of harm reduction are potentially valid strategies for mitigating an individual's risk, it can be more complex to understand fully the potential impact (net effect) on the entire population.^{9,21,48,51} Unlike most physicians and applied researchers, the public health community is responsible for considering the net impact of e-cigarettes on the entire population, rather than the impact on individual smokers. There are many concerns in this respect, including the potential for e-cigarette use to result in dual-use, delay or prevent complete cessation among smokers, reinstate former smokers to nicotine addiction, or to increase initiation of nicotine addiction among young people who would have otherwise never been tobacco users.

The vaping communities' apparent lack of acknowledgment of the potential negative impacts of e-cigarettes appears to have discredited them in the eyes of many public health officials. Continuing down this path may generate beliefs that the vaping community cares little for public health, are primarily interested in selling their fast-growing companies to the highest tobacco company bidder, and will oppose any meaningful regulations of their product, however reasonable and necessary they may be—essentially aligning the vaping community's practices to tobacco companies' well-established playbook.

Where do we go From Here?

To fill the information vacuum with accurate information, public health officials must provide the public with a clear synopsis of what the current literature suggests about e-cigarettes, with the caveat that research investigations are ongoing, necessitating periodic updates. A recent example of a comprehensive evidence review was provided by Public Health England. To help regulators and policy makers in their country and the EU make a more informed decision, public health officials together with tobacco scientists and researchers, actively sought to examine and efficiently present the accumulated evidence on e-cigarettes to the public. While some aspects of the Public Health England review have been challenged,⁵² they produced both thoughtful and publically available video commentaries and a written evidence based report on e-cigarettes.^{8,53} Such active leadership by a nonregulatory, public health agency is potentially a step that can be taken in the United States.

Providing and educating the public on the harm continuum of tobacco and nicotine products would help consumers more easily understand the continuum of risk that exists, with combustible tobacco on one end and nicotine replacement products on the other, and e-cigarettes somewhere towards the lower end but not the lowest end of the continuum. We understand that the tobacco companies' support of the continuum is worrisome to some public health officials. However, if public health officials take the lead on this issue and actively collaborate with the vaping community, we argue that they will have a better chance at securing regulations that improve the public health as opposed to allowing the tobacco companies to use their versions of the harm reduction continuum as a tool to gain favor or at least “face time” with the public, tobacco research scientists, and regulators.⁵⁴ Additionally, public health officials' concern over consumers misconstruing the continuum as “everything except cigarettes are safe and risk free” can be addressed; consumers are generally capable of effectively incorporating corrective health information about reduced exposure tobacco products if presented in the appropriate way.^{55,56}

The current director of the FDA's Center for Tobacco Products appears to be supportive of (1) educating the public and making policy decisions based on a "continuum of risk" and (2) the possibility of a combustible tobacco "endgame scenario" of reducing nicotine in combustible products to nonaddictive levels while allowing e-cigarettes and other low-nitrosamine tobacco products to remain presently at addictive levels.⁵⁷ This scenario would be a "win" for public health officials—with reduced tobacco-related death and disease; for the vaping industry—with a favorable position for e-cigarettes in the marketplace; and for the vaping community—with continued access to safer nicotine delivery devices if they are unable or unwilling to quit all nicotine.

Common Ground Against Big Tobacco

Identifying what common ground exists is essential to bringing public health and the vaping communities together and minimizing the involvement of Big Tobacco companies in determining public policy. Working together to achieve a superordinate goal could help thwart Big Tobacco's continuing efforts to promote smoking, the country's leading cause of preventable death. Below is a list of *potential* common ground positions and policies as a possible starting point for discussions between the vaping community and the public health community.

Positions

1. Quitting all nicotine is much better than continuing to smoke combustible cigarettes or even using less dangerous nicotine products such as e-cigarettes.
Rationale: Nicotine is an addictive substance that has the ability to disrupt cellular metabolic processes, damage the genome, inactivate tumor suppressor genes, amplify oncogenes, and promote a cancer-supporting environment.⁵⁸⁻⁶⁰
2. E-cigarettes may be a viable option for those who fail to quit with FDA-approved products.
Rationale: NRT is still the safest quit method involving nicotine substitution, but it does not work for most. Given e-cigarettes improved toxicological profile over cigarettes⁸ and higher level of satisfaction compared to NRT,⁶¹ it seems prudent that those who fail to quit with FDA approved products should be encouraged to switch to e-cigarettes.
3. Complete quitting of combustible tobacco is essential when switching to e-cigarettes.
Rationale: Sustained dual use of e-cigarettes and combustible cigarettes (eg, vaping and daily smoking) is unlikely to substantially reduce health risks due to the level of harm caused by combustible tobacco.^{62,63}
4. E-cigarettes should not increase the initiation of nicotine addiction or serve as a gateway product to combustible tobacco.
Rationale: E-cigarettes should serve as a replacement for smoking among smokers, but should not lead to individuals who would never have smoked or former smokers becoming addicted to nicotine. The rationale for not wanting e-cigarettes to serve as a gateway product to combustible tobacco is self-evident as smoking kills approximately one out of two long-term users.
5. E-cigarette marketing should not be attractive to youth or promote a norm that nicotine addiction is healthy or common.
Rationale: The goal of e-cigarette marketing should be to encourage smokers to switch and to prevent youth who would

otherwise smoke cigarettes to instead use e-cigarettes, and not serve to entice youth who would never have tried.

6. E-cigarettes should not be allowed to be used where smoking is not allowed.

Rationale: This policy provides an environment supportive of those who are trying to quit nicotine altogether and those who are trying to stay quit, while sending consistent messages to all that nicotine addiction is unhealthy and not an acceptable social norm to emulate. However, an exemption should be made for retail vape shops by including them in the statutory definitions of retail tobacco stores, currently exempted in 26 of the 37 states that have enacted strong or comprehensive statewide smoke-free laws.⁶⁴ We understand that the current evidence suggests that secondhand aerosol is much less harmful than secondhand smoke and likely to confer few if any harmful effects⁶⁵⁻⁶⁷; however, this finding is largely based on studies examining only nicotine exposure as a result of passive vaping. What if any health risks will result from passive exposure to other harmful and potentially harmful constituents (eg, formaldehyde) that are also found in e-cigarette aerosol is currently unknown. Concerns that not allowing e-cigarettes to be used everywhere will lead to few(er) smokers switching to them should be assuaged by the fact that e-cigarettes' benefits of lower harm,^{8,35} lower price,⁶⁸ and better taste,⁶⁹ will likely allow them to continue to enjoy a favorable position in the marketplace over combustible cigarettes.

Regulation

1. E-cigarettes need to be regulated by the FDA, including strict youth access laws and some form of regulatory process to ensure the quality and ingredients of e-liquid. Publication of these long-anticipated initial FDA regulations on e-cigarettes should help provide essential clarity and direction to state and local public health officials who have historically deferred to FDA authority.
2. E-cigarette marketing should not be appealing to children and should not be conducted in places that are frequently accessed by children.
3. The FDA should be cautious to not regulate e-cigarettes to the degree that they are no longer viable as a competitor to combustible products.⁷ Moreover, regulation should be proportionate to the risk.
4. Vaping should be prohibited wherever smoking or tobacco use is prohibited, with retail vape shops included in exemptions for retail tobacco stores.
5. The vaping community should remain open to additional policies and regulation on e-cigarettes should the available science dictate a need.
6. Policies and programs shown to reduce use of combustible cigarettes should be pursued with renewed fervor at the national, state, and local levels. In particular, the price of combustible cigarettes should be increased through taxes and/or minimum price laws.⁷⁰
7. Assuming research currently being conducted on very low nicotine cigarettes continues to demonstrate efficacy to decrease smoking rates,⁷¹ no smoking compensation (ie, more frequent puffing/smoking, deeper puffs),⁶⁹ and a lack of increased uptake by nonusers, the FDA should move swiftly to drastically reduce the nicotine content in combustible products to nonaddictive levels.⁷²

Conclusions and Next Steps

Though the public health community and the vaping community may never come to full agreement on some issues, any level of alliance that seeks to collaboratively advance effective public policy would likely accelerate the decline of combustible cigarettes. At the very least, building relationships with the public health community will help ensure that the vaping community is viewed as an asset in ongoing efforts to improve public health. Such collaboration will require recognition of the potential of e-cigarettes as a new tool in the toolbox for reducing tobacco-caused illness and death.

With that in mind, and understanding that legislative policy reform can take years, we suggest a starting point of first bringing together the two camps at a series of forums convened by nonregulatory organizations. We also suggest inviting members from Public Health England and national and international tobacco research scientists to the forums. Initial forums could potentially be conducted at a series of venues such as the Truth Initiative (formerly the American Legacy Foundation), various tobacco research centers across the country (eg, Oklahoma Tobacco Research Center), or as part of annual conferences of national/international organizations such as the Society for Research on Nicotine and Tobacco. A subsequent forum could possibly be convened by an organization such as the Association of State and Territorial Health Officials (ASTHO), which represents public health agencies across the United States.

The goal of these forums would be first and foremost to confirm what common ground exists. For example, using pre-forum surveys, the forum leaders could see how close or how far apart the attendees are on certain positions. Those positions with less variability would be discussed first to help build collaborative momentum. To prevent an in-group/out-group mentality from occurring at the forums, members of the vaping and public health community, along with scientists should be mixed into small groups and encouraged to discuss topics and questions presented at the forums, again with the purpose of finding common ground. Another important focus of the forums should be a review presentation of the current e-cigarette literature as well as literature examining the best public health strategies to reduce smoking (eg, increased taxes, clean-indoor air laws, etc.), to ensure that all attendees have the same information and can come to a decision using the best available science. The forums could culminate in the creation of a publishable platform to advise the public health community on the positions and public policies supported jointly with the vaping community to dramatically accelerate the decline of combustible tobacco use.

We fully understand that this is only a *first* step and not a perfect solution, but a step nonetheless and in the right direction. To end the ideological debate over e-cigarettes and join forces against Big Tobacco, both sides will have to change their approach and perspective. If both communities continue down a road of opposition, the result may be missed opportunities, misguided alliances, and—ultimately—poorer public health.

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